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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,269

03/31/2004

Lawrence Shah

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EXAMINER

NGUYEN, DUNG T

ART UNIT

PAPER NUMBER

2828

MAIL DATE

DELIVERY MODE

07/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

### Application No.

10/813,269

### Applicant(s)

SHAH ET AL.

### Examiner

Dung (Michael) T. Nguyen

### Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 48-79 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-22, 24-31, 48-54, 56-70 and 72-79 is/are rejected.
- 7) ☒ Claim(s) 7, 23, 55 and 71 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**OFFICE ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 11-15, 48-51, 59-62 are rejected under 35 U.S.C. 102(b) as being anticipated by Palese (2002/0131164).

With respect to claims 1-3, 11-15, 48-51, 59-63, Fig.1-3 shows an apparatus for generating optical pulses, wherein each pulse may have individualized characteristics, the apparatus comprising:

laser means 14 (fiber amplifier 114, sketcher grating 104, and compressor 34 or 134) for generating the bursts of composite pulses (it is understood that the pulses are composite because of the fixed duration threshold between two pulses);

control means 128 that controls the laser means; and

beam manipulation means 24 and 124 for monitoring the wavelength characteristics (spectrometer (power meter) 24) and a variable repetition rate (photodiode 124 measures a rep. rate as stated in claim 4 of this application) of the composite pulse bursts and generates feedback data for the control means for pulse wavelength control and the variable repetition rate (para.0009).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6, 8, 16-22, 24, 26-31, 52-54, 56, 64-70, 72, and 75-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palese (2002/0131164) in view of Kane (6219142).

With respect to claims 4, 16-20, 27-31, 52, 64-68, and 75-79, Palese disclose all limitations of the claims except for the means for monitoring the pulsewidth (optical gating device).

Kane teaches the means for monitoring the pulsewidth (optical gating device) in Fig.1.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Palese what is taught by Kane to monitor the laser pulsewidth (col.3, l.39-60).

With respect to claims 5-6, 21-22, 53-54, and 69-70, Kane discloses in Fig.1 the means 14 for converting an optical frequency comprising at least one optical member that converts a portion of the fundamental of the laser pulses into at least one higher order harmonic signal.

With respect to claims 8, 24, 56, and 72, Kane discloses in Fig.1 a spectrometer 16.

With respect to claims 26, Kane discloses the beam profiler (col.22, l.28-34 describes the same meaning as a profiler).

Claims 9, 25, 57, and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palese (2002/0131164) in view of Kane (6219142) and further in view of DeSimone (5933274).

Palese and Kane disclose all limitations of the claims except for the telescope and steering optics.

DeSimone teaches in Fig.1 and col.3, lines 14-24 the telescope and steering optics.

it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Palese and Kane what is taught by DeSimone to allow accurate beam alignment to a cross hair mark on the target and to allow the user to control the plane of ablation (col.3, lines 18-24).

With respect to claims 10, 58, and 74, Kane discloses the beam profiler (col.22, l.28-34 describes the same meaning as a profiler).

### ***Response to Arguments***

Applicant's arguments filed 06/06/07 have been fully considered but they are not persuasive.

- On pages 21-22, Applicants argued that Palese failed to tailor the properties of a train of pulses such that each pulse may have individualized characteristics. This ability enables, for example, particular advantages with respect to target manipulation in order to achieve specific results in materials processing.

Additionally, Applicants pointed out Palese Fig.4 to traverse the rejection. The Examiner disagrees.

- In response, the examiner did not use Palese Fig.4 to reject the claims and only Fig.1-3 are used in the rejection. Palese did teach a laser means 14 for generating the bursts of composite pulses (para.0012-0013), wherein each pulse may have individual characteristics (please note that it is inherent that each laser pulse may have individual characteristics as one skilled in the art would know). Besides, the claims do not recite the limitation of the laser apparatus having particular advantages with respect to target manipulation in order to achieve specific results in materials processing and therefore, the argument is irrelevant.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Allowable Subject Matter***

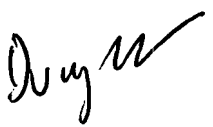
Claims 7, 23, 55, and 71 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The above prior art fail to disclose the limitations as recited in the claims.

**Communication Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone number is (571) 272-1949. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

  
Michael Dung Nguyen

6/26/07